AMENDMENT TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of claims in the Application.

Listing of Claims:

Claim 1 (Currently amended): A disk drive managing method for managing disk drive in multiple disk-array system ~~containing at least one disk-array, each array having at least one disk drive with an array configuration, said array configuration comprising an array signature and serial check sum of each disk drive in said array~~, said method comprising the steps of:

providing an interface operable to access a plurality of disk-arrays coupled thereto, where data is distributed across each disk-array of said plurality of disk-arrays independently of said distribution across other disk-arrays of said plurality of disk-arrays;

~~detecting each disk drive of said system~~;

reading ~~said~~ an array configuration from ~~said detected~~ a disk drive coupled to a corresponding disk-array coupled to said interface, said array configuration including an array signature and a plurality of serial check sums, each of said plurality of serial check sums corresponding to a disk drive belonging to said corresponding disk-array;

validating said array signature of said disk drive;

reading said plurality of serial check sums ~~sum~~ of ~~other~~ another disk drive

coupled to said corresponding disk-array ~~from the same array~~;

determining if ~~recognizing~~ said disk-array ~~to be~~ corresponding to said

plurality of serial check sums read in said serial check sums reading step is

recorded as one of said plurality of disk-arrays coupled to said interface ~~or not~~;

and

recording ~~from~~ said serial check sum corresponding to said disk drive in

said plurality of serial check sums of said corresponding disk-array.

Claim 2 (Currently amended): The disk drive managing method as in claim 1,

wherein said array signature is a ~~specific~~ predetermined value.

Claim 3 (Currently amended): The disk drive managing method as in claim 2,

wherein said disk drive is an independent disk drive in a span array [[,]] if said

array signature could not be validated in said array signature validating step, said

span array being coupled to said interface ~~value is fault~~.

Claim 4 (Currently amended): The disk drive managing method as in claim 1,

wherein said serial check sum of ~~each~~ said corresponding disk drive ~~in one array~~ is

arranged in said plurality of serial check sums according to a location of said disk

drive in said corresponding disk-array ~~sequentially~~.

Claim 5 (Currently amended): The disk drive managing method as in claim 4,

wherein said serial checksum of ~~each~~ said corresponding disk drive is obtained by

a numeration on a model number, a serial number, and a firmware revision

number of said disk drive.

Claim 6 (Currently amended): The disk drive managing method as in claim 1,

wherein each of said plurality of disk-arrays is identified by said plurality of serial

check sums ~~sum of each disk drive in one array can be used to identify said arrays~~.

Claim 7 (Currently amended): The disk drive managing method as in claim 1,

further comprising a step of adding a ~~new array~~ record for a new disk-array ~~array~~

when said ~~array~~ corresponding disk-array is not recorded as one of said plurality

of disk-arrays as determined in said disk-array recorded determining step ~~in said~~

~~system~~.

Claim 8 (Currently amended): The disk drive managing method as in claim 7,

further comprising a step of assigning a ~~new~~ serial number ~~for a~~ to said new disk-

array ~~array~~.

Claim 9 (Currently amended): The disk drive managing method as in claim 1,

further comprising steps of:

determining ~~checking~~ whether all disk drives in said plurality of disk-arrays

have been detected; and

recording integrity properties for each disk-array in said plurality of disk-

arrays ~~all arrays~~.

Claim 10 (Currently amended): The disk drive managing method as in claim 9,

~~wherein~~ further including the step of determining from said integrity property ~~is~~

~~for checking~~ whether all disk drives recorded in said plurality of serial check sums

~~sum~~ of each disk drive of ~~one array are~~ said corresponding disk-array have been

detected and recorded ~~by said system~~.

Claim 11 (Currently amended): The disk drive managing method as in claim 9,

wherein said array configuration is stored at ~~said~~ a last sector of each disk drive.

Claim 12 (Currently amended): A disk drive managing method for managing disk

drive in multiple disk-array system containing at least one disk-array, ~~each array~~

~~having at least one disk drive, each disk drive having an array signature and a~~

~~serial check sum stored at said last sector thereof,~~ said method comprising the

steps of:

providing an interface operable to access a plurality of disk-arrays coupled thereto, where data is distributed across each disk-array of said plurality of disk-arrays independently of said distribution across other disk-arrays of said plurality of disk-arrays;

~~detecting each disk drive from said system;~~

reading ~~said~~ a last sector from ~~said detected~~ a disk drive coupled to a corresponding disk-array coupled to said interface, said last sector having stored therein an array configuration including an array signature and a plurality of serial check sums, each of said plurality of serial check sums corresponding to a disk drive belonging to said corresponding disk-array;

validating said array signature of said disk drive;

reading said plurality of serial check sums ~~sum~~ of ~~other~~ another disk drive ~~from the same array~~ coupled to said corresponding disk-array;

determining if ~~recognizing~~ said disk-array ~~to be~~ corresponding to said plurality of serial check sums read in said serial check sums reading step is recorded as one of said plurality of disk drives coupled to said interface ~~or not~~; and

recording ~~from~~ said serial check sum corresponding to said disk drive in said plurality of serial check sums of said corresponding disk-array.

Claim 13 (Currently amended): The disk drive managing method as in claim 12, wherein said array signature ~~has specific~~ is a predetermined value.

Claim 14 (Currently amended): The disk drive managing method as in claim 12,

wherein said array signature is stored at ~~said~~ a first position of said last sector.

Claim 15 (Currently amended): The disk drive managing method as in claim 12,

wherein said serial check sum of ~~each~~ said corresponding disk drive ~~in one array~~ is

arranged in said plurality of serial check sums according to a location of said disk

drive in said corresponding disk-array ~~sequentially~~.

Claim 16 (Currently amended): The disk drive managing method as in claim 15,

wherein said serial check sum of ~~each~~ said corresponding disk drive is obtained by

a numeration on a model number, a serial number, and a firmware revision

number of said disk drive.

Claim 17 (Currently amended): The disk drive managing method as in claim 15,

wherein each of said plurality of disk-arrays is identified by said plurality of serial

check sums ~~sum of each disk drive of each disk drive in one array can be used to~~

~~identify said arrays~~.

Claim 18 (Currently amended): The disk drive managing method as in claim 12,

further comprising the steps of:

adding an array record for ~~recording~~ a new disk-array when said

corresponding disk-array is not recorded as one of said plurality of disk-arrays

~~array~~; and

assigning a new serial number for said new disk-array ~~array~~.

Claim 19 (Currently amended): The disk drive managing method as in claim 12,

further comprising the steps of:

determining ~~checking~~ whether all disk drives in said plurality of disk-arrays

have been detected; and

recording integrity properties for each disk-array in said plurality of disk-

arrays ~~all arrays~~.

Claim 20 (Currently amended): The disk drive managing method as in claim 19,

~~wherein~~ further including the step of determining from said integrity property ~~is~~

~~for checking~~ whether all disk drives recorded in said plurality of serial check sums

~~sum~~ of each disk drive ~~in the same array are~~ of said corresponding disk-array have

been detected and recorded ~~by said system~~.